ChatGPT for translators: a survey

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Abstract

This article surveys the most important ways in which translators can use ChatGPT. The focus is on scenarios where ChatGPT supports the work of translators, rather than tries to replace them. A discussion of issues that translators need to consider when using large language models, and ChatGPT in particular, is also provided.

1 Introduction

ChatGPT is a conversational agent based on a large language model (LLM) specifically trained to enable users to have conversations on a broad range of topics in a desired format, style and language. Even though Open.AI released ChatGPT only at the end of November 2022, in less than 2 months it reached over 100 million users being considered the fastest growing consumer application (Hu, 2023). The emergence of ChatGPT may seem to the majority of the general population out of nowhere, but Open.AI has generated headlines in mainstream media in 2020 with GPT3, a large language model which is a predecessor of ChatGPT. Because GPT3 was able to generate texts in English that are difficult to distinguish from those written by humans, there was a general fear that it could be misused to generate misinformation, abuse, or produce student essays.

ChatGPT was built on top of GPT3.5, and more recent versions on GPT4, and part of its success comes from the fact that it operates a "freemium model" which means that many of its features can be accessed for free. This is in contrast to GPT3 which was available only to a limited number of users via an API. The fact that ChatGPT can conduct conversations in many languages widened its user base. One of the sections of this survey will provide a brief overview of how ChatGPT has been trained to perform better than its predecessors and give a non-technical explanation of how it works.

Recent months have seen a flurry of blog posts, YouTube videos and an increasing number of scientific articles which discuss a wide range of uses of ChatGPT from advice for healthy eating[1] and getting rich[2] to how to use ChatGPT to support and replace people in their jobs.[3] The fact that ChatGPT can handle multilingual text and can translate between languages attracted the attention of the translation industry, leading to renewed predictions that translators will be replaced by computers in the near future.

The purpose of this article is to provide an overview of how ChatGPT can be used by translators as a support tool and to discuss whether translators should be afraid of ChatGPT. While writing this article, it was difficult to decide which sources to use. There are numerous posts on social media and self-published articles on arXiv which can be relevant. However, because some are not peer-reviewed in any way, at times, their analysis is superficial and they contain speculations which are not supported by any data. For this reason, I will refer mainly to articles that have been published in peer-reviewed journals and conference proceedings, and to arXiv articles and posts that have generated enough discussion to consider that they were peer-reviewed in an informal manner.

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[1] How to Create a Healthy Meal Plan Using ChatGPT `https://www.makeuseof.com/create-healthy-meal-plan-using-chatgpt/`

[2] Make Money With AI and ChatGPT: How To Earn $1,000 a Month `https://finance.yahoo.com/news/money-ai-chatgpt-earn-1-143015520.html`

[3] It should be pointed out that the inclusion of these links in the article does not represent an endorsement or recommendation. It is possible to retrieve many similar articles using Google and other search engines. These two links were selected because they come from more reliable sources and are likely to be written better than some other sources. However, this does not mean that their content should be trusted.

Reports from market research companies like Common Sense Advisory[4] and Nimdzi[5] were also used to inform this survey.

2 Translation-related uses of ChatGPT

The rest of this extended abstract will briefly present the topics to be discussed in the full survey. A common theme throughout these topics is that ChatGPT should not be considered a tool that produces texts which can be used without human revision/checking. Instead it is seen as a powerful tool that supports, rather than replaces, its users (translators in the context of this article).

2.1 As a monolingual writing support tool

Part of the success of ChatGPT comes from the fact that it can provide support while writing texts. ChatGPT can function as a grammar and spell checker "on steroids", and it can rewrite texts in different styles. Given that ChatGPT was trained to be a conversational agent, the style of the text produced may not be appropriate in all the settings.

2.2 As a translation engine

Even though ChatGPT was not trained explicitly to translate texts, it proved capable of translating between languages. Initial experiments used simple prompts like `Translate the following sentences to [TARGET_LANGUAGE]` and showed that commercial translation engines like Google Translate and DeepL perform significantly better than ChatGPT (Jiao et al., 2023). More recent work, focused on prompt engineering to improve the quality of the translation (Gao et al., 2023). ChatGPT was also used as a translation tool that can help avoid gender bias, with better results than Neural Machine Translation (Castilho et al., 2023). A general observation is that the quality of translation is very different from one language pair to another. For example, Gao et al. (2023) report better results when the target language is English, whilst Castilho et al. (2023) observe poor results when Irish, a low resourced language, is involved. Small scale experiments conducted by the author of this paper seem to suggest that ChatGPT can translate noisy social media texts better than existing translation engines.

2.3 As an evaluation metric

ChatGPT was used to rate the quality of a translation using a prompt which contained the source sentence and the target. Kocmi and Federmann (2023) experiment with different large language models, including ChatGPT, and show they obtain state of the art results on WMT quality estimation tasks. They notice that quite often ChatGPT provides not only the quality score, but also an explanation for the score. Provided that the explanation makes sense, which is not always the case, this could pave the way to have explainable scores.

2.4 For terminology extraction

Given how good ChatGPT is at explaining concepts, it was proposed to use it for terminology extraction. Using prompts it was possible to extract terms, generate their definitions and translate them to other languages. To the best of my knowledge, no formal evaluation has been carried out to be able to say how well this approach works.

3 Discussion and conclusions

This extended abstract has discussed a few scenarios in which ChatGPT could prove useful for translators. The focus was on the application and output of ChatGPT. However, in addition to this, there are numerous other issues that should be considered when translators use ChatGPT such as privacy, hallucinations, speed and costs. All these issues will be discussed in the full survey.

The success of Open.AI with ChatGPT has pushed other companies like Google and Meta to release their own products and led to the availability of numerous large language models of different sizes and developed for different purposes. Open sourced models like Meta's LLama-2 are currently used by the research community to develop tools that can help translators either by translating content or by assessing the quality of translations. It is very likely that in the near future we will see tools based on LLMs that are more appropriate for translation scenarios, but they will require more specialised expertise.

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